California Energy Commission

STAFF REPORT

# LOCALIZED HEALTH IMPACTS REPORT

Addendum 6 for Selected Projects With Location Changes Awarded Funding Through the Alternative and Renewable Fuel and Vehicle Technology Program Under Solicitation PON-11-602 – Alternative Fuels Infrastructure: Electric, Natural Gas, Propane, E85, and Diesel Substitutes Terminals

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# ADDENDUM 6

The *Localized Health Impacts Report Addendum for Selected Projects Awarded Funding Through the Alternative and Renewable Fuel and Vehicle Technology Program Under Solicitation PON-11-602 – Alternative Fuels Infrastructure: Electric, Natural Gas, Propane, E85, and Diesel Substitutes Terminals* was originally posted September 21, 2012.[1]

The assessment approach of this addendum is as written in CEC-600-2012-004-AD. This addendum to the localized health impacts report assesses and reports on the potential localized health impacts of station location changes for RTC Fuels, LLC dba Pearson Fuels, project "19 Pearson Fuels E85 Stations." The original E85 station locations are listed in Table 1, along with the new replacement station locations.

**Table 1: Address Change for Ten E85 Stations**

| Original Site Location | New Address |
|---|---|
| 2401 Golden Hill Road, Paso Robles, California 93446 | 499 Sandalwood Drive, Calimesa, California 92320 |
| 175 Main Street, Watsonville, California 95076 | 1740 Newport Boulevard, Costa Mesa, California 92627 |
| 830 Leong Drive, Mountain View, California 94043 | 13900 Palm Drive, Desert Hot Springs, California 92240 |
| 4200 Firestone Boulevard, Southgate, California 90280 | 1701 East Main Street, El Cajon, California 90210 |
| 17520 Brookhurst Street, Fountain Valley, California 92708 | 1065 West Holt Boulevard, Ontario, California 91761 |
| 934 South Grand Avenue, Glendora, California 91740 | 8815 Lake Murray Boulevard, San Diego, California 92119 |
| 12931 Garden Grove Boulevard, Garden Grove, California 92843 | 3774 Main Street, San Diego, California 92113 |
| 16500 Los Gatos Boulevard, Los Gatos, California 95032 | 10961 South Beach Boulevard, Stanton, California 90680 |
| 1602 East Valley View Parkway, Escondido, California 92029 | 159 South Euclid Avenue, Upland, California 91786 |
| 2940 Lytton Street, San Diego, California 92106 | 17499 Yorba Linda Boulevard, Yorba Linda, California 92886 |

Source: Energy Commission staff analysis

1 Williams, Sarah, Eric Law. 2012. *Localized Health Impacts Report*. California Energy Commission, Fuels and Transportation Division. Publication Number: CEC-600-2012-004-AD

All 10 locations have the same nonattainment status for ozone, particulate matter (PM) 2.5, and PM 10 as the original locations. See Table 2.[2]

**Table 2: Community Status and Project Overview**

| Project | At-Risk Community | CEQA Completed | Air District Permit Status | Attainment Status for Ozone, PM (2.5), PM (10) |
|---|---|---|---|---|
| 499 Sandalwood Drive, Calimesa, California 92320 | No | Complete | In Process | Nonattainment (PM [10]) |
| 1740 Newport Boulevard, Costa Mesa, California 92627 | No | Complete | In Process | Nonattainment (PM [10]) |
| 13900 Palm Drive, Desert Hot Springs, California 92240 | Yes | Complete | In Process | Nonattainment (PM [10]) |
| 1701 East Main Street, El Cajon, California 90210 | Yes | Complete | In Process | Nonattainment (PM [10]) |
| 1065 West Holt Boulevard, Ontario, California 91761 | Yes | Complete | In Process | Nonattainment (PM [10]) |
| 8815 Lake Murray Boulevard, San Diego, California 92119 | No | Complete | In Process | Nonattainment (PM [10]) |
| 3774 Main Street, San Diego, California 92113 | No | Complete | In Process | Nonattainment (PM [10]) |
| 10961 South Beach Boulevard, Stanton, California 90680 | Yes | Complete | In Process | Nonattainment (PM [10]) |
| | | | | |

2 "Particulate matter" is unburned fuel particles that form smoke or soot and stick to lung tissue when inhaled, and a chief component of exhaust emissions from heavy-duty diesel engines.

| Project | At-Risk Community | CEQA Completed | Air District Permit Status | Attainment Status for Ozone, PM (2.5), PM (10) |
|---|---|---|---|---|
| 159 South Euclid Avenue, Upland, California 91786 | No | Complete | In Process | Nonattainment (PM [10]) |
| 17499 Yorba Linda Boulevard, Yorba Linda, California 92886 | No | Complete | In Process | Nonattainment (PM [10]) |

Source: Energy Commission staff analysis

The 10 replacement locations will result in new surroundings, as shown in Table 3. The surroundings are comparable with the original locations.

**Table 3: Surroundings for the New Site Locations**

| New Address | Surroundings (within a 1-mile radius) |
|---|---|
| 499 Sandalwood Drive, Calimesa, California 92119 | 1 school, 1day-care facility, and no health-care offices |
| 1740 Newport Boulevard, Costa Mesa, California 92627 | 11 schools, 9 day-care facilities, and 7 health-care offices |
| 13900 Palm Drive, Desert Hot Springs, California 92240 | 5 schools, 5 day-care facilities, and no health-care offices |
| 1701 East Main Street, El Cajon, California 90210 | 8 schools, 7 day-care facilities, and 3 health-care offices |
| 1065 West Holt Boulevard, Ontario, California 91761 | 6 schools, 4 day-care facilities, and 2 health-care offices |
| 8815 Lake Murray Boulevard, San Diego, California 92119 | 13 schools, 3 day-care facilities, and 1 health-care office |
| 3774 Main Street, San Diego, California 92113 | 11 schools, 5 day-care facilities, and 2 health-care offices |

| New Address | Surroundings (within a 1-mile radius) |
|---|---|
| 10961 South Beach Boulevard, Stanton, California 90680 | 5 schools, 5 day-care facilities, and 2 health-care offices |
| 159 South Euclid Avenue, Upland, California 91786 | 17 schools, 6 day-care facilities, and 5 health-care offices |
| 17499 Yorba Linda Boulevard, Yorba Linda, California 92886 | 8 schools, 7 day-care facilities, and 4 health-care offices |

Source: Energy Commission staff analysis

The following overview includes a project description that includes impacts, benefits, outreach efforts, and a discussion of the potential health impacts related to air pollutants explicitly identified in the project. In addition, demographic data for the planned project locations are provided in Table 4.

## RTC Fuels, LLC dba Pearson Fuels

Project Name: 19 Pearson Fuels E85 Stations

The 10 new proposed stations will be located at existing retail gasoline and diesel fueling stations. The proposed stations are located in both residential and business areas.

### *Project-Generated Emissions*

The projects have been evaluated using Appendix A of the August 2007 *Full Fuel Cycle Assessment: Well-to-Wheels Energy Inputs, Emissions, and Water Impacts*, CEC-600-2007-004-REV and the December 2007 *State Alternative Fuels Plan*, CEC-600-2007-011-CMF. It is verified in the Full Fuel Cycle Assessment (FFCA) that even corn-based E85 shows at least a 70 percent reduction in petroleum use and a reduction in carbon intensity (CI) ranging between 15 percent and 36 percent as compared to the CI of California reformulated gasoline (RFG). Sugarcane and biomass-based E85 show at least a 72 percent reduction in petroleum use and a reduction in CI ranging between 60 percent and 72 percent as compared to the CI of California RFG.

### *Project Health Impacts*

The majority of the E85 that will be dispensed from the stations will be displacing California RFG gasoline that would be otherwise transported and burned within the same localized air shed. Therefore, the addition of the E85 to the stations will decrease the area criteria pollutants and toxic air contaminates in an amount directly related to the difference between the fuel cycle emissions of those fuels.

*Project Summary*

Pearson will replace the fuel in one of the existing underground storage tanks so that all stations can sell high blends of ethanol (E85) in addition to the fuel it currently sells. To do this, it is necessary to replace some of the components attached to the top of the tank as well as replace two of the existing fuel dispensers that are compatible with E85.

Specifically, Pearson will replace the drop tube system and add Phase 1 Vapor Recovery to what is now the diesel tank. The existing drop tube and turbine assembly will be removed and replaced with new certified components compatible with E85. Pearson will also replace two of the existing fuel dispensers with two certified E85 dispensers.

Pearson will use a 90.1 CI ethanol-to-blend E85. E85 in California is nominally 83 percent ethanol and 17 percent California Reformulated Gasoline Blendstock for Oxygenate Blending (CARBOB) with CI scores of 90.1 (in Pearson's case) and 95.86, respectively. In performing the calculation, you can see that the project's E85 has an implied CI score of ((.83 x 90.1) + (.17 x 95.86)) = 91.08, a very substantial improvement over CARBOB.

*Outreach Efforts*

Once each station is open, Pearson will hold a grand opening event where it will sell fuel at $1.85 per gallon or give it away for free for a few hours to garner press coverage and local community support. Once the word is out, Pearson will continue to leverage the national marketing of E85 stations that has been going on for years through several national organizations. There are at least 12 online California E85 station locator tools operated by many different organizations. These tools will communicate to the public the availability of E85 in their area. Pearson will work closely with all of the locator tool providers to keep them up to date and can readily share this station information for the Energy Commission's DRIVE website.

Pearson will have informational brochures located in brochure holders at the dispensers. Pearson will also have Web links on the front page of its website as new stations come on-line. New stations will be added with direction services being available as they are now for Pearson's other stations. As the infrastructure develops, Pearson may offer its station partners the opportunity for a co-op program where 1 cent per gallon will go into an advertising, outreach, and education program to promote the fuel at all of its stations statewide, providing significant economies of scale.

## Location Analysis and Community Impacts

Based on the staff's assessment of the proposed station locations, it is expected that none of the surrounding communities would be disproportionately impacted by the installation of the projects. While overall air quality depends on a number of factors, the Energy Commission expects that air quality will improve over time due to the majority of E85 that will be dispensed

at the stations will be replacing California reformulated gasoline. Replacing California reformulated gasoline with E85 will decrease the area criteria pollutants and toxic air contaminates which will benefit all surrounding communities, especially those at risk.

Location analysis and community impacts are based on comparing the projects location demographics to that of California, as indicated in Table 4. The 10 project locations, composed of 9 cities, have 5 poverty EJ indicators, 12 minority population EJ indicators, 2 age EJ indicators, and 4 unemployment EJ indicators. Although Table 4 does indicate cities with EJ indicators, the projects will not result in elevated risks. The proposed stations will reduce emissions, exposure, and health risks at local levels resulting in benefits.

**Table 4: Demographic Data Including EJ Indicators (percentage)**
**(Compared to the State of California)**

Yellow highlighted areas indicate numbers that meet the definition for EJ Indicators.

| | Persons Below Poverty Level (2008-2012) | Black persons (2010) | American Indian and Alaska Native (2010) | Persons of Hispanic or Latino Origin (2010) | White persons (2010) | Persons under 5 years of age (2010) | Persons over 65 years of age (2010) | Un-employm-ent rate (July 2014) |
|---|---|---|---|---|---|---|---|---|
| California | 15.3 | 6.2 | 1.0 | 37.6 | 40.1 | 6.8 | 11.4 | 7.4 |
| Calimesa | 14.5 | 1.1 | 1.3 | 22.4 | 72.7 | 4.6 | 25.9 | 7.2 |
| Costa Mesa | 14.1 | 1.5 | 0.6 | 35.8 | 51.8 | 6.5 | 9.2 | 5.1 |
| Desert Hot Springs | 28.6 | 8.2 | 1.4 | 52.6 | 34.4 | 9.0 | 9.6 | 13.5 |
| El Cajon | 24.8 | 6.3 | 0.8 | 28.2 | 56.8 | 7.6 | 11.0 | 9.1 |
| Ontario | 16.4 | 6.4 | 1.0 | 69.0 | 18.2 | 8.4 | 6.7 | 9.6 |
| San Diego | 15.4 | 6.7 | 0.6 | 28.8 | 45.1 | 6.2 | 10.7 | 6.6 |
| Stanton | 16.9 | 2.2 | 1.1 | 50.8 | 21.8 | 7.9 | 10.0 | 9.4 |
| Upland | 11.5 | 7.3 | 0.7 | 38.0 | 44.2 | 6.2 | 12.1 | 6.1 |
| Yorba Linda | 2.8 | 1.3 | 0.4 | 14.4 | 65.7 | 4.8 | 11.8 | 3.8 |

Sources: Unemployment information from the State of California, Employee Development Department (EDD) Labor Market Information Division: http://www.labormarketinfo.edd.ca.gov/CES/Labor_Force_Unemployment_Data_for_Cities_and_Census_Areas.html and Demographics information from the U.S. Department of Commerce, U.S. Census Bureau: http://quickfacts.census.gov/qfd/states/06/0609864.html

## Summary

The ten proposed project locations are anticipated to impact each city positively due the majority of the E85 that will be dispensed from the stations will be replacing California RFG gasoline that would be otherwise transported and burned within the same localized air shed.

Therefore, the addition of the E85 to the stations will decrease the area criteria pollutants and toxic air contaminates in an amount directly related to the difference between the fuel cycle emissions of those fuels. The anticipated impact to each city would be positive in terms of cleaner air and anticipated greenhouse gas reductions.